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Corps of Engineers shows solar-powered streetlights to Afghan media

KABUL – Solar-powered streetlights have boosted commerce in a busy business district in downtown Kabul where the U.S. Army Corps of Engineers installed solar-powered streetlights late last year, Kabul Mayor Muhammad Yunus Nawandish told Afghan news reporters on Thursday, May 19.

Before the streetlights were in place, merchants in the area by a major hospital typically kept their shops open about eight hours a day, he said during a press conference under one of the lights.

“If we can light the city, they can work four or five hours more. And when they are working more, the income of the household is going up. It directly affects the level of the lives of the people and families,” Nawandish said while standing alongside U.S. Army Col. Thomas Magness, the commander of the Corps of Engineers in northern Afghanistan, who oversaw the project.

Streetlights also make the city of 5 million people seem more vibrant and secure, the mayor said. He thanked the Corps of Engineers for installing the first phase of lights and encouraged the organization to keep up the development.

Magness promised that would happen. The Corps of Engineers plans to illuminate about 10 kilometers of roadways in the capitol city during the next few years. That’s important because the war-ravaged city has an inadequate electric grid and most streets go dark after sunset. The stand-alone street lights generate their own power without drawing from Kabul’s limited power network.

The mayor used the press conference to explain the basics of solar-powered energy to eight local TV and newspaper reporters and to their audiences. “As you can see, during the day, it feeds on sunlight and at night, the light comes on. As daylight comes, it shuts off,” he said in Dari. “I feel that Afghanistan is a country that feeds on sunlight.”

In fact, Kabul receives more than 300 days of sunlight a year, which makes it an ideal city for solar power.

The streetlights on the first phase are about 27 feet tall and are equipped with solar panels and Lithium ion batteries with expected life spans of 20 years. The batteries are secured in locked containers atop of the light fixtures to prevent tampering and they store enough energy to run three consecutive nights without a sunny day to recharge. They power light-emitting diode lamps that are energy efficient, low maintenance and environmentally friendly.

The streetlights project also includes training for Kabul public works employees to maintain the lights.

In addition to improving commerce and security, the streetlights are improving Kabul residents’ perception of their city, Nawandish said. For example, since the lights were installed more families walk along the street and shop at night, giving the area a busy, bustling atmosphere, he said.

“It affected very nice the psychology of the people. The people are very happy. They are coming here. They are spending. They are taking photographs. They are very happy,” the mayor said in English.

The results survey conducted for the Corps of Engineers after the first phase went operational mirrored the mayor’s impression, Magness said. “One of the first comments we got was: ‘It feels like a city. When you have a city that is lit up at night, it feels like a city.’ That’s the psychology piece, where people feel more comfortable,” he said.

The first phase of the project featured 28 poles and 56 lights along Jumhoriat Road, from Jumhoriat national specialized Hospital to Sherpoor traffic circle, a 0.88 kilometer stretch of road crowded with delivery trucks, cars, motorcycles, donkey carts and pedestrians.

The streetlights along Foreign Affairs Road is part of Nawandish’s “Open Kabul’s Streets to the Night” program, which is intended to boost commerce along several important commercial corridors. The Corps of Engineers and the mayor’s office have announced four phases total. They are:

Phase 1 – Jumhoriat Road, from Jumhoriat National Specialized Hospital to Sherpoor traffic circle, 0.88 kilometers, 28 poles and 56 lights. It was valued at \$181,000 and completed in December 2010.

Phase 2 – Foreign Affairs Road, from Jumhoriat National Specialized Hospital through Malak Azghar Square to Zanzaq Square near the Turkish Embassy, 2.05 kilometers, 140 poles and 140 lights. It is valued at \$900,000. Work began in January and is projected to be finished in November 2011.

Phase 3 – Wazir Akbar Khan Road, from Zanzaq Square to Indira Gandhi Children’s Hospital, Wazir Akbar Khan Hospital and Bastar Military Hospital, 2.2 kilometers, 295 poles and 295 lights. The cost and exact timeline have not been finalized.

Phases 4 – From Great Masoud Circle to Shaheed Abdul Haq Circle to the Old Microryan residential area, 5.5 kilometers, 848 poles and 956 lights. The cost and timelines have not been finalized.

The lights are attracting plenty of attention, the mayor said. “A lot of proposals from the people, we got. They asked us to light their streets,” he said in English. He hopes that the success of the program will encourage additional investment to light more streets in the desert city.

Nawandish emphasized that the sense of safety created by the streetlights is unprecedented. “It’s the first time, because in this area, the security was not so good, but now you can walk at 1 o’clock or 2 o’clock in the morning,” he said.

The mayor walked the entire length of the road under the streetlights after midnight to judge for himself. “I wanted to see. And I saw the reaction of the people,” he said. It was all positive.

Corps of Engineers officials are confident they’ve identified a way to improve the city in a manner that’s tangible and significant to average residents, Magness said. “We’re on our way. We’ve got more work to do.”

An added benefit is that the solar-powered streetlights project appears to have fostered the renewable energy industry in Kabul, he said. When the Corps of Engineers solicited bids to install the first phase of the project, only one Afghan company submitted a qualified bid. By the time the Corps of Engineers solicited bids for the second phase, more than 10 Afghan companies submitted qualified bids.

“We’re now working on Phase 3 and we’re finding so many people have the capacity and the ability to build what we’re looking for, so we’ve created an industry in Kabul that wasn’t here before,” Magness said. “I think that we’re going to have many bidders on future phases.”



Col. Thomas Magness, center, and Kabul Mayor Muhammad Yunus Nawandish, right, tell Afghan news reporters on May 19, 2011, that shop owners along a busy business street in Kabul have been keeping their businesses open longer since solar-powered streetlights were installed late last year. Photo by J.D. Hardesty, U.S. Army Corps of Engineers.